CHEMICAL AGE OF INDIA

COMBINED 1970 AUTHOR/SUBJECT INDEX TO

VOLUME 21 NOS. 1-12

AUTHORS No. Page Acharya, C. S. - Washing of Salt Bhatia R. K. S. - Effect of Activation Tem-896 perature of Cellulose Acetate on Sorp-Acherjee, B. - Fineness of Product from 899 tion - Desortion Hysteresis with 10 Air-Swept Mill Water Vapour ... 8 705 Ajzalpurkar, A. B. - Liquid Cyclone Process for Preparation of Low Gossy Pol Bhatt, B. I. - Optimal Design of Multiple-High-Protein Flour From Cotton Effect Evaporators by Evolutionary Seed - A 712 Operation Method Agarwal, H. C. - Analysis of Spray Drying Bhattacharya S. K. - Some Problems En-227 Systems countered in Sulfur Melting for Pro-Agarwal, H. C. - "Gravity Flow" Falling duction of Sulfuric Acid by the Chemico Contact Process and a Review 591 Film Evaporator of the Relevant Literature ... Aggarwal, J. S. - Hydrolysis of Semi-Dry-Birnbaum Herman - Ammonia Synthesis ing Oils - Part II - Splitting Studies Loop Design and Optimization ... on Rubber Seed Oil 701 4 459 Carnahan Brice - Chemical Engineering Anzai, Masao - New Direction of Economic Calculating System - A Cooperation 919 Chatterjee R. - Laboratory Drawing Arni, V.R.S. - New Break-Throughs in Distillation Tray Design ... Stretching Instrument for Melt Spun 10 877 Synthetic Fibre Ashar, N. G. - Guide to Pilot Plant Studies Chaudhurt S. B. - Reserpine From Rauvoin an Indian Environment - A ... 113 lfia Serpentina Grown in Assam ... Atlas F. Sheldon - Some quantitative Chohan P. S. - Management: Old Vs new Considerations on Spinning 541 *** **** Balachandran S. - Recovery of Arsenic Dabhade B. Shrikant - Eriochrome Black Trioxide from Magnesium Ammonium 669 T as an Interesting Chelatochrome Arsenate Indicator 8 ... 732 Balachandran, T.R. - Recovery of Arsenic Davison J. W. - Profit-Centered Pilot Trioxide from Magnesium Ammonium Planting - ... Arsenate 669 Deshpande S. P. - Optimal Design of Balasubramaniam, S. - Case study of Some Multiple - Effect Evaporators by Evo-Process Design and Operation Consilutionary Method derations of a Modern Urea Plant ... 283 *** 12 7 1135 Banerjee, A. K. - An International View Douglas Stuart - Growth in Man-Made Fibres Industry in Britain ... of the Chemical Industry 345 Basu, D. K. - Engineering of off-site Faci-Fluiters Luis Michael - Process Equipment lities for the Shriram Fertilizer Com-Including Materials of Construction 817 plex at Kota 20 Funk Werner - Spinnerettes and Spinning Betrabet, R. V. - Design of a Vaporising Discs for Man-Made Fibres System for Liquid Ethylene Gedam P. H. - Hydrolysis of Semi-Drying Bhasin S. D. - Problems and Progress of Oils Part II Splitting Studies on Rub-Instrumentation in Chemical Indusber Seed Oil 701 tries in Developing Countries ... 834 Georgs H. O. - Operation of Chemical Plants in Developing Countries Bhatacharya A. K. - Air Pollution - A 802 threat to Human Welfare 85 Ghosal S. R. - Catalytic Steam Reforming of Hydrocarbon for Production of Bhatia, B. B. - Production Control in a Multi-Product Batch Plant ... Synthesis Gas

CHEMICAL AGE OF INDIA, AUTHOR INDEX TO VOLUME 21, 1970

	No.	Page		No.	Page
Ghosh, S. C Catalytic Steam Reforming of Hydrocarbon for Production of Synthesis Gas	2	123	Keshavamurthy, G. S Case Study of Process Design and Operation Consi- derations of a Modern Urea Plant	3	283
		120	Krishnadas, M. S Innovate or Perish	7	657
Glos, F Optimisation of an Alkaline Chloride Electrolysis Plant with Mer- cury cells	4	434	Krishnamoorthi, V Liquid Cyclone Pro- cess for Preparation of Low Gossy-		001
Goel, P Effect of Vapour Space Residence-Time and Oxygen Partial -			Pol High-Protein Flour from Cotton- Seed -A	8	712
Pressure on Performance of Plate Absorbers in Nitric Acid Plants Grohoskpf Herbert - Report from Indus-	2	158	Krishnamurthy, A Liquid Cyclone Pro- cess for Preparation of Low GossyPol High-Protein Flour from Cotton-		
try on the Use of Digital Computer Simulation and Optimization of Che- mical Process Systems	4	363	Seed -A	8	712
Grohoskpf Herbert - Ammonia Synthesis Loop Design and Optimization	4	459	Pinene to Dipentene and p-Cymene Over Alumina Catalysts	6	597
Gupta, J. P Engineering Chemical Plants in India	3	213	Kondratiev, V. N Chain Reaction of Discoveries -The	6	610
Gupta, U. R Spray Drying of Strepto- mycin	3	250	Kureha, - New Carbon Fibre Process Lal, D. P Production Control In a	5	560
Handler, E Electrical Equipment	9	844	Multi-Product Batch Plant Ludewig, Walter - Emancipation of Che-	4	417
Henley, J. Ernest - Use of Computers in Chemical Engineering Design Cour-			mical Engineering in Germany Mandelia, S. P Future for Cellulosic	3	220
Henley, J. Ernest - Role of Computers in	4	358	Fibres -The	5	536
Engineering Education - The Henley, J. Ernest - New Stoichiometry -	1	29	ing Chemical Process	8	425 744
The	1	38	Maitra, D Study of Mass Transfer Ac- companied with Chemical Reaction	6	608
tions And Limitations of Optimization Huguenin, M. Dipl. Ing Realization of	1	65	Mallaiah, C Splitting of Indian Vege-		000
Chemical Projects in Developing Countries - 2 Case Studies	9	780	table Oil- VII Less Known Oils of Commercial Importance Mark, F. Hermann - Some quantitative	6	605
Hunter, G. William - Use of Evolutionary Operation in the Developing Coun-			Considerations on Spinning Martin, E. N On-Line Computer Control	5	541
tries - The	4	398	Within ICI	5	565
Husain Asghar - Optimization of a Chemical Reactor Using Gradient Method	4	468	Martin, E. N Design and Development of Process Control Schemes Using Analogue and Scale Modelling Tech-		
Iguchi Toshizo - Message from Japan Consulting Institute	11	915	niques-The	2	184
Joshi, J. V Benefication of Low Grade Limestone in the Cement Industry in			for Manufacture of Wet Process Phosphoric Acid	1	78
India	3	241	Mehdiratta, G. R Granulated NPK Fer- tilizers -Their Selection and Econo- mics of Manufacture		#10
phate on the Thermal And Cementing Properties of Magnesium Oxychloride			Mehta, P. K Trends in Technology of Cement Manufacture	10	612 884
Cement Obtained From Calcined Dolo- mite	8	725	Mirchandani, G. A Technology Deve- lopment - An Approach to Forging		
by Photochemical Smog	8	754	a Breakthrough Miyagi, Kyoichi - Message from Japan	12	1047
Kapoor, A. S Chemical Plant Mainten- ance And Inventories	4	349	Consulting Institute	11	915
Kelkar, Jayant - Horizontal Batch Reactor	8	744	Moses, G Instrumentation and Control -From the Supplier's Point of View	9	831

CHEMICAL AGE OF INDIA, AUTHOR INDEX TO VOLUME 21, 1970

	No.	Page		No.	Page
Nair, K. V Process Development and Pilot Plant Studies on the Recovery of the Waste Sulphuric Acid from a			Rao, H. Shripathi - Hydrolysis of Semi- Drying Oils Part II - Splitting Stud- ies on Rubber Seed Oil		AL.
Titanium Plant	2	102	Rao, U. B Design of a Vaporising Sys-	8	701
Narayanamurthy, J Process Develop- ment and Pilot Plant Studies on the Recovery of the Waste Sulphuric Acid			tem for Liquid Ethylene Rao, M. Gopala - Application of Digital Simulation to a Typical Industrial	3	235
from a Titanium Dioxide Plant	2	102	Urea Reactor	2	148
Oshima Takeji - Present & Future of Japan's Chemical Industry	11	925	Rao, M. V. Ramana - Generalized Method for Estimating Liquid Viscosities	7	675
Palit, D. K How to Optimize Heat Exchangers	3	255	Rao, R. Srinivasan - Recovery of Arsenic Trioxide From Magnesium Ammonium		
Parekh, Shailesh - Versatile PTFE for Chemical Industry	9	769	Arsenate	7	669
Paul Kelly - Dynamics & Control of a Distillation Column Part I Transient		102	Rao, S. D. Thirumala - Splitting of Indian Vegetable Oils VII Less Known Oils of Commercial Importance	6	605
Response to feed Composition Perturbations	2	177	Rao, T. C Effects of Particle Characteristics on Apparent Viscosities of So-		
Paul, R. N Liquid Liquid Biphase Be- haviour in Aqueous Pyridine Base	8	716	lid Suspensions Rao, T. C Computers in the Analysis and	1	76
Payne, - The Cat-Ox System	6	642	Optimisation of Comminution circuits	2	133
Persch, F. Dipl Ing Piping Systems	9	827	Ratnasamy, P Utilization of Indian Turpentine Oil - I. Conversion of β-		min!
Petersen, Holm J. E Analysis of Spray Drying Systems	3	227	Pinene to Dipentene and p-Cymene	100	F00
Pradhan, A. T Application of Digital Simulation to a Typical Industrial Urea Reactor	2	148	Ratnasamy, P Infra-Red Spectra of Benzene and Cyclohexane Adsorbed		597
Radhakrishnan, V. R Dynamics & Control of Distillation Column Part I Transient Response to feed Composition Perturbations	2	177	on Platinum - Alumina Ratnam C. V. S Recovery of Arsenic Trioxide from Magnesium Ammonium Arsenate	10	889
Ragunathan, P All Digital Simulation of Process for Optimization	4	471	Reddy, K. S Mercury Cells with Dimensionally Stable Metallic Anodes for		1000
Rai, G. P Spray Drying of Streptomycin	3	250	Rose Cecil - Changing Concepts of Main-	11	1028
Rajaraman, V Design of a Self-Optimizing Chemical Process	4	425	tenance of Fertiliser Plants	12	1085
Ramachandran, P. S Optimal Design of Multi-bed Sulfur Dioxide Oxidation			Rosen M. Edward - The New Stoichio- metry	1	38
Unit	4	420	Rowe Philip - Its the Approach that Sells the Goods	5	561
Ramakrishna, G Splitting of Indian Vegetable Oils VII Less Known Oils			Roy, N. K Dynamics & Control of Dis- tillation Column - Part I: Transient		
of Commercial Importance Ranganajan, K Laboratory Drawing Stretching Instrument for Melt Spun	6	605	Response to feed Composition Perturbations	2	177
Synthetic Fibres	5	549	Roy, B. B Evaluation of Various Wet Processes Phosphoric Acid Manufac-		
Rao, C. D Chilled Water Economy in Suspension of Vinyl Chloride	4	409	turing Techniques	3	298
Rao, C. P. S Maintenance and Repair Problems of Chemical Plant Equip-			Sakoda Mansaaki - Chemical Fibre Industry in Japan	5	557
Rao, D. Thirumala - Lecithin Require-	9	810	Saldanha, M. S Indian Oil Lube Blending Plant	4	3
ments of Indian Confectionery Surface - Coating and Printing Ink		man.	Sangal, P. Satendra Eriochrome Black T. As an Interesting Chelatochrome Indicator		732
Industries	8	709			103
Rao, D. P Optimal Design of Multi- bed Sulfur Dioxide Oxidation Unit	4	- 420	Sarkar, B All Digital Simulation Process for Optimization	4	471

CHEMICAL AGE OF INDIA, AUTHOR INDEX TO VOLUME 21, 1970

	No.	Page		No.	Page
Sarma, E. L. N Splitting of Indian Vege- table Oil VII Less Known Oils of Com- mercial Importance	. 6	605	Subrahmanyam K Optimal Design of Multiple-Effect Evaporators by Evolu- tionary Operation Method	12	1135
Sastri, S. R. S Generalized Method for Estimating Liquid Viscosities, A	7	675	Swaminathan, T. V Recovery of Arsenic Trioxide From Magnesium Ammo- nium Arsenate	20.00	een
Seelmann, G Optimisation of an Alkaline Chloride Electrolysis Plant with Mercury Cells Selder D. Warren - Chemical Engineering Calculating System, A	4	434	Syverson Aldrich - An Academic Experiment in Process Design and Economic Evaluations-Para metric Studies Provide a New Dimension	4	366
Sen, Abijit - Computers in the Analysis and Optimisation of Comminution			Takasugi Shin-Ichi - Need for Greater Economic Co-operation in the Seven-		1/11/3
Sethna, J. J Engineering of Off-site Facilities for the Shriram Fertilizer	2	133	ties Tanaka Yoshihiro - Threat to Health	11	EQ.
Complex at Kota Shah, B The Pharmaceutical Industry	1	20	Posed by Photochemical Smog Taneja A, D Complex Compound of Acetoacetanilide with Bivalent Mer-	8	
in India Shah, C. Ashok - Versatile PTFE for Chemical Industry	12	769	Thampy, R. T Development of Man-	6	1504
Shah, V. K Chemical Plant Maintenance and Inventories	4	349	Made Fibre Industry Vasudev, A Process Design Via Simulation - An Application of Pacer		521
Sharma, S. K Supporting Electrolytes for A Polargraphic And Tensammetric Studies of Organic Species	8	721	Vasudev, A Effect of Vapour Space Residence - Time and Oxygen Partial- Pressure on Performance of Plate	2110	Aurust.
Singhania, A. K Process Design Via Simulation—An Application of Pacer	3	140	Absorbers in Nitric Acid Plants Vishwanathan K Lecithin Require-	2	148
Singhania Sitaram - Role of Synthetic Fibre Industry in India	5	533	ments of Indian Confectionery, Surface - Coating and Printing Ink	8	709
Sinha, R. C Design Features of a Mod- ern Soda Recovery System for a Pulp and Paper Mill Based on Kraft Process Using Indigenous Raw Materials	3	310	Wagner, D Optimisation of an Alkaline Chloride Electrolysis Plant with Mer- cury Cells	4	434
Sioli, G. Ing Benzoic Acid Hydrogena- tion - A Step of the SNIA Viscosa's			Chemical Plants & Equipment	9	789
Caprolactam Synthesis Temperature in Lubricating Oils	3	265 61	Wickham, H. P Operation of Chemical Plants in Developing Countries	9	802
Sommers A. Howard - Chlorine Industry	11	1013	Wilhelm, J. Donald - Computer - Aided Simulation of Chemical Process Sys- tems For Analysis, Design and		in bring
Srivastava K. P Complex Compound of Acetoacetanilide with Bivalent Mercury	6	595	Optimization	1	27
Srivastava R. S Effect of Magnesium Sulphate on the Thermal and Cem- enting Properties of Magnesium Oxy- chloride Cement Obtained from Cal- cined Dolomite	8	725	Report Wilhelm, J. Donald - Workshop on Digital Computer Simulation of Chemical Process Systems	2	162 377
Stahlmann Dirk Ing New Process for the Production of Formaldehyde made of waste Methanol	5	532	Witzel K. W. Dipl. Ing Realization of Chemical Projects in Developing Countries (1) Exploration and Plan-	0-730	172
Strasser Bernd - Development of the Mercury Cell, The - A Typical case	11	1025	ning of Chemical Plants Yeddanapalli, L. M Utilization of Indian Turpentine Oil - I Conversion of \(\beta\)-	9	774
Subbargo, E. C Panel Discussion on Industry University Collaboration	4	388	Pinene to Dipentene and p-Cymene Over Alumina Catalysts	6	597

A STATE OF THE STA	\mathbf{U}	BJ	ECTS		
44.75					
	No	Page		No	Dogo
Academic Experiment in Process Design	140.	rage	Chemical Companies in 1970, Selected	NO.	Page 1153
and Economic Evaluation-Parametric Studies Provide A New Dimension,			Chemical Engineering Calculating System, A - by Warren D, Seider and		1100
An - Prof. Aldrich Syverson	4	366	Brice Carnahan	1	45
Achema Diary	9	761	Chemical Fibre Industry in Japan - Ma-		
Air Pollution - A threat to Human Welfare - Dr. A. K. Bhatacharya	2	85	Saki Sakoda Chemical Plant Engineering Exhibi-	5	557
All Digital Simulation of Process for Op- timization - P. Raghunathan and B. Sarkar.	4	471	tion - 5th Chemical Plant Maintenance and Inven-	10	869
American Voluntary Standards for Chemical Process Pumps	1	179	tories-by A. S. Kapoor & V. K. Shah Chilled Water Economy in Suspension	4	349
Ammonia Synthesis Loop Designs and Optimization - Herbert Grohskopt			Polymerization of Vinyl Chloride - C. D. Rao	4	409
and Herman Birnbaum	4	459	by Howard A. Sommers 1970	11	1013
Analysis of Spray Drying Systems - J. E. Holm Petersen and H. C. Agar- wal	3	227	Company News - 353, 355, 648, 876 Complex Compound of Acetoacetanilide	-	
Announcements	7	688	with Bivalent Mercury - K. P. Srivas-		202
Application of Digital Simulation to a Typical Industrial Urea Reactor -	mi		Computers in the Analysis and Optimisa- sation of Comminution Circuits -	6	595
A. T. Pradhan and M. Gopala Rao	2	148	T. C. Rao & Abijit Sen	2	133
Association of Man-Made Fibre Industry- Benefication of Low Grade Lime Stone	5	519	Computer - Aided Simulation of Chemi- cal Process Systems, For Analysis, Design, And Design Optimization -		
in the Cement Industry in India - by J. V. Joshi	3	241	by Dr. Donald J. Wilhelm Computer Control in Indian Chemical	1	27
Benzoic Acid Hydrogenation - A Step of the SNIA Viscosa's Caprolactam			Industry Design and Analysis of Chemical Process	1	5
Synthesis - Ing. G. Sioli	3	265	Systems - The	2	89
Book Reviews - 339, 563, 651, 751, 858, 906, 1030, 1159			Design and Development of Process Control Schemes Using Analogue and		
Case Study of Some Process Design and Operation Considerations of a Modern Urea Plant - G. S. Keshavamurthy &			Scale Modelling Techniques - Dr. E. N. Martin Design Features of a Modern Soda Re-	2	184
S. Balasubramanian	3	283	covery System for a pulp and Paper		
Catalytic Steam Reforming of Hydro- carbon for Products of Synthesis			Mill Based on Kraft Process Using Indigenous Raw Materials - by R. C.		
Gas - S. R. Ghosal & S. C. Ghosh.	2	123	Sinha	3	310
Cat-Ox System - Dr. A. J. Payne	6	642	Process - by V. V. Mandke & V.		
Central Prayon Process for Manufacture of Wet Process Phosphoric Acid - K.			Rajaraman Design of a Vaporising System for Liquid	4	425
V. Mathew Chain Reaction of Discoveries - The - V.		78	Ethylene - U. B. Rao and R. V. Betrabet	2	235
N. Kondratiev	6	616	Development of Man-Made Fibre Indus-		
Changing Concepts of Maintenance of Fertiliser Plants - Cevil Rose	12	1085	try - Scope and Prospects - Dr. R. T. Thampy	. 5	521

CHEMICAL AGE OF INDIA, ARTICLE INDEX TO VOLUME 21, 1970

	No.	Page		No	Page
Development of the Mercury Cell, The, A- Typical Case - by Dr. Bernd Strasser	11	1025	"Gravity Flow" Falling Film Evaporator - H. C. Agarwal	6	591
Directory of Man-Made Fibre Manufacturers In India	4	509	Growth in Man-Made Fibres Industry in Britain by Stuart Douglas	5	553
Dynamics & Control of a Distillation Column Part I: Transient Response			Guide to Pilot Plant Studies in an Indian Environment, - N. G. Ashar	2	113
to feed Composition Perturbations Effect of Activation Temperature of Cellu-	2	177	Horizontal Batch Reactor - Jayant Kelkar & S. P. Mahajan	8	744
lose Acetate on Sorption - Desortion Hysteresis with Water Vapour - R. K. S. Bhatia	8	705	How to Optimise Heat Exchangers - D. K. Palit	3	255
Effect of Magnesium Sulphate on the Thermal and Cementing Properties of Magnesium Oxychloride Cement Ob- tained from Calcined Dolomite - K. P.		103	Hydrolysis of Semi-Drying Oils - Part II- Splitting Studies on Rubber Seed Oil - P. H. Gedam, H. Shripathi Rao and J. S. Aggarwal	8	701
Kacker & R. C. Srivastava Effects of Particle Characteristics on Ap-	8	725	Indian Chemical Manufacturer's Associ- ation/Report on 29th Annual General		
parent Viscosities of Solid Suspensions - T. C. Rao	1	76	Meeting Indian Man-Made Fibre Industry	5	516
Effect of Vapour Space Residence - Time And Oxygen Partial Pressure on Per- formance of Plate Absorbers in Nitric			Indian Standards - 338, 649, 691, 749, 857 Infra- Red Spectra of Benzene and Cyclo- hexane Adsorbed on Platinum -		
Acid Plants - P. Goel & A. Vasudev	2	158	Alumina - P. Ratnasamy	10	889
Electrical Equipment - Ing. E. Handler	9	844	Innovate or Perish	7	657
Emancipation of Chemical Engineering in Germany - Professor Walter Ludewig	3	220	Instrumentation and Control - From the Supplier's Point of View-G, Moses	9	831
Engineering Chemical Plants in India - by J. P. Gupta	3	213	International News International View of the Chemical In-	11	923
Engineering of Off-Site Facilities for the Shriram Fertilizer Complex at Kota -			dustry by A. K. Banerjee Impact of Synthetic Fibres — Its the Ap-	4	345
J. J. Sethna and D. K. Basu Eriochrome Black T as an Interesting	1	20	proach that Sells the Goods - Philip Rowe	5	561
Chelatochrome Indicator - Shrikant B. Dabhade & Satendra P. Sangal	8	732	Impressions of UNIDO Petrochemical Symposium	2	190
Evaluation of Various Wet process Phos- phoric Acid Manufacturing Techni-		000	Japan's Chemical Industry in the 70's	11	913
niques - B. B. Roy Fertiliser Blue-Print - The	1	7	Japanese Chemical Manufacturing Tech- nology Available for Licencing and		1
Feedstocks for Fertilizers Fertiliser Boxscore	12		J. G. C. Hydro-Carbon Steam Reforming	11	941
Fertiliser Plant Maintenance - Report on US AID/FACT Seminar			Process	11	967
Fineness of Product From Air-Swept Mill - B. Acherjee			Laboratory Drawing Stretching Instru- ment For Melt Spun Synthetic Fibres- R. Chatterjee & K. Rangarajan	5	549
First Methylamines Plant in F.C.I	6	645	Lecithin Requirements of Indian Confec-		013
Formulation and Implementation of In- dustrial Programmes	8		tionery, Surface-Coating and Printing Ink Industries - K. Visawanathan &		
Future for Cellulosic Fibres - The -	5	536	S. D. Thirumala Rao	8	709
General Outline of the Chemical Machi- nery Industry in Japan		77	Liquid Cyclone Process for Preparation of Low Gossy Pol High-Protein Flour From Cotton Seed -A- by A. B. Afzal-		etimos 14
Generalized Method for Estimating Liquid Viscosities, A - S. R. S. Sastri and			purkar, A. Krishnamurthy, V. Krish- namoorthi	8	712
M. V. Ramana Rao Granulated NPK Fertilizers - Their Selec-	7	675	Liquid Liquid Biphase Behaviour in Aqueous Pyridine Bases - R. N. Paul.	8	716
tion and Economics of Manufacture -		612		1	

CHEMICAL AGE OF INDIA, ARTICLE INDEX TO VOLUME 21, 1970

	No.	Page		No.	Page
Maintenance and Repair Problems of Che-			Present and Future of Japan's Chemical	210.	2 4480
mical Plant Equipment - C. P. S. Eao	9	810	Industry - Its Relation to Southeast Asia, Epecially India-Takeji Oshima		***
Man-Made Fibre Industry	5	493	Problems and Progress of Instrumentation	11	925
Man-Made Fibre in the Seventies Management: Old Vs New Concepts - P. S. Chohan	7	1155	in Chemical Industries in Developing Countries by S. D. Bhasin	9	834
Manufacturing of Chemical Plants and Equipment by Dipl-Ing. F. Wesser	9	789	Process Development and Pilot Plant Studies on the Recovery of the Waste		
Mercury Cells with Dimensionally Stable Metallic Anodes For Caustic Chlorine			Acid from a Titanium Dioxide Plant- Dr. K. V. Nair & J. Narayanamurthy Process Design Via Simulation - An	2	102
Production - K. S. Reddy Message From Japan Consulting Institute by Kyoichi Miyagi & Toshizo Iguchi	11	1028	Application of Pacer - A. K. Sin- ghania and A. Vasudev	2	140
\$7-41-m-1 \$7	11	915	Process Equipment - 207, 670, 747.		
	11	921	Process Equipment Including Materials of	7/29	
Naphtha Reforming	3	293	Construction - Luis Michael Fluiters	9	817
Need for Greater Economic Co-operation in the Seventies by Shin-Ichi Taka- sugi	11	917	Production Control in a Multi-Product Batch Plant - B. B. Bhatia	4	417
New Break-Throughs in Distillation Tray			Profit - Centered Pilot Planting - J. W. Davison & G. E. Hays	2	94
Design by Dr. V. R. S. Arni	10	877	Realization of Chemical Projects in Dev-		
New Carbon Fibre Process by Kureha New Developments 689, 901	5	560	eloping Countries - (1) Exporation And Planning of Chemical Plants -		
New Direction of Economic Co-operation			Dipl. Ing. K. W. Witzel	9	774
by Masao Anzai	11	919	Realization of Chemical Projects in Dev-		
New Processes 204, 337, 532, 685, 765, 853			eloping Countries - (2) - Case Studies Dipl. Ing. M. Huguenin	9	780
New Stoichiometry, The - by Edward M. Rosen and Ernest J. Henley	1	38	Recovery of Arsenic Trioxide from Mag-		100
Nissan Chemical Industries Ltd.,	11	921	nesium Ammonium Arsenate - T. V.		
Notes & News - 200, 334, 647. 683, 746. 765			Swaminathan, T. R. Balachandran, S. Balachandran, R. Srinivasan Rao		
On-Line Computer Control Within ICI -			and V. S. Ratnam	7	669
E. N. Martin	5	565	Report on Achema	6	621
Operation of Chemical Plants in Developing Countries - by H. O. Georgs &		000	Report from Industry on the Use of Digital Computer Simulation and Optimiza-		
H. P. Wickham	9	802	tion of Chemical Process Systems		
Optimal Design of Multi-bed Sulfur Dio- xide Oxidation Unit	4	420	- Herbert Grohskopf	4	363
Optimal Design of Multiple - Effect Eva-		IL	Role of Computers in Engineering Education, The - Ernest J. Henley	1	29
porators by Evolutionary Operation Method-B. I. Bhatt, S. P. Deshpande			Role of Synthetic Fibre Industry in India - Sitaram Singhania	5	533
& K. Subrahmanyam	12	1135	Safety in Chemical Industry	6	583
Optimisation of an Alkaline Chloride Electrolysis Plant with Mercury Cells		101	Scale - Up, A Status Report - Dr. Donald J. Wilhelm	2	162
-G. Seelmann, F. Glos and D. Wagner Optimization of a Chemical Reactor	*	434	Seminar on Corrosion in Chemical Industry	2	197
Using Gradient Method - Asghar	4	468	Seminar on Maintenance of Equipment in Process Plants	5	573
OTAI'S Third Refresher Course in Oils & Fats	2	203	Shriram Chemical Industries - Kota Urea	1	9
Panel Discussion on Industry - University Collaboration - Dr. E. C. Subbarao	4	388	Fertiliser Plant Some Quantitative Considerations on		
Pharmaceutical Industry, The - B. Shah	12	1145	Spinning - Hermann F. Mark & Sheldon F. Atlas	5	541
Piping Systems - Dipl. Ing. F. Persch	9	827	Some Problems Encountered in Sulfur		311/2
Polyvinyl Chloride - Case Study of an Industry	11	982	Melting for Production of Sulfuric Acid by the Chemico Contact Process		
Practical Applications and Limitations of Optimization by Richard R. Hughes	1	65	and a Review of the Relevant Litera- ture - S. K. Bhattarcharya	6	585

CHEMICAL AGE OF INDIA, ARTICLE INDEX TO VOLUME 21, 1970

	No.	Page	WITCH THE STREET	No.	Page
Spinnerettes and Spinning Discs for Man- Made Fibres - by Dr. Werner Funk	10	893	Threat to Health Posed by Photochemical Smog - by Yoshihiro Tanaka Ryuichi Kanko	8	754
Spliting of Indian Vegetable Oil - VII Less Known Oils of Commercial Im- portance - G. Ramakrishna, C. Mal-			Trends in Technology of Cement Manufacture by P. K. Mehta	10	884
laiah, E. L. N. Sarma and S. D. Thiru- mala Rao	6	605	Ugine Distillers Acrylonitrile Process, The Case of the Fixed Bed Catalyst	6	618
Spray Drying of Streptomycin - G. P. Rat and U. R. Gupta	3	250	Use of Computers in Chemical Engineer- ing Design Courses by Ernest J. Henley	4	358
Study of Mass Transfer Accompanied with Chemical Reaction - D. Maitra	6	603	Use of Evolutionary Operation in the Developing Countries, The - by William	A door	-
Super-Sized Polymerizers Made Feasible, Application of	11	1011	G. Hunter Utilisation of Indian Turpentine Oil -I-	4	398
Supporting Electrolytes For AC Polargraphic and Tensammetric Studies of			Conversion of β-Pinene to Dipentene and p-Cymene Over Alumina Cata- lysts - P. Ratnaswamy, V. Krishna-		MINE.
Organic Species - S. K. Sharma	8	791	samy and L. M. Yeddanapalli	6	597
Technical Hydrogen Production for Fer- tiliser Industry in India - N. L. Muk-			Versatile PTFE For Chemical Industry - Ashok C. Shah & Shailessh Purekh	9	769
herjee	1	166	Washing of Salt - by C. S. Acharya &		
Technical Press Abstracts	9	851	K. Swaminathan	10	896
Technology Development - An Approach to Forging a Breakthrough - G. A.			Workshop on Digital Computer Simula- tion of Chemical Process Systems -		101
Mirchandani	-12	1047	Dr. D. J. Wilhelm	4	377

10th EDITION OF

INDIAN CHEMICAL DIRECTORY

THE STANDARD REFERENCE PUBLICATION ON THE INDIAN CHEMICAL INDUSTRY

Will be available at end of 1971 only on a subscription basis as supplement to "Chemical age of India" in a loose-leaf spiral-bound setting.

ANNUAL SUBSCRIPTION TO I.C.D. Rs. 50/- payable in advance.

Renewal subscription, every subsequent year:

Send your order and remittance today to: TECHNICAL PRESS PUBLICATIONS 5/1, Convent Street, Bombay-1 (INDIA)

